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SEPASAL is a database and enquiry service about useful "wild" and semi-domesticated plants of tropical and subtropical drylands, developed and maintained at the Royal Botanic Gardens, Kew. "Useful" includes plants which humans eat, use as medicine, feed to animals, make things from, use as fuel, and many other uses.

Since 2004, there has been a Namibian SEPASAL team, based at the National Botanical Research Institute of the Ministry of Agriculture which has been updating the information on Namibian species from Namibian and southern African literature and unpublished sources. By August 2007, over 700 Namibian species had been updated.

Work on updating species information, and adding new species to the database, is ongoing. It may be worth visiting the web site and querying the database to obtain the latest information for this species.

## Internet SEPASAL

New query

Edit query

View query results

 *Display help*In names list include:  synonyms  vernacular names and display: All  names per page*Your query found 1 taxon***Harpagophytum procumbens (Burch.)DC. ex Meissn. [1669]**

Family: PEDALIACEAE

**Synonyms**

Uncaria procumbens Burch.

Harpagophytum burchelii Decne.

**Vernacular names**

Unspecified language	kanako, legatapitse, makakare (Botswana) sengaparile [2591]
Afrikaans (Namibia)	duiwelsklou [2136] [2795] [5083] [5098] [5163], rankdoring [1340]
Afrikaans (Southern Africa)	beesdubbeltjie [1340], ghamaghoe [5163], grapple thorn [1340], kloudoring [1340] [2795], ouklip [1340], skerpioendubbeltjie [1340], tou [1340], toutjie [1340]
Bushmen (Botswana)	xwate [5154]
Damara (Namibia)	gomakhub [5083]
English	Devil's claw [2136] [2795] [5088] [5163], grapple plant [1340] [5163] [5238]
English (Namibia)	grapple vine [2136], harpago [5083]
English (Southern Africa)	wool-spider [1340] [5098]
French	tubercule de griffe du diable [2593]
German	teufelskrallenwurzel [2593], teufelskralle [2593], trampelklette [2593] [5098], südafrikanische teufelskrallenwurzel [2593]
German (Namibia)	Teufelskralle [5083] [5098]
Herero (Namibia)	otjihangatene [5083] [5098]
Jul'hoan (Namibia)	!ao!aro [5083], llxamtsi-lloro [5083]
Khukh (Namibia)	llkhuripellkhams [5083] [5084] [5098]
Nama (Namibia)	llkhurillkham [5083]
Oshikwanyama (Namibia)	elyata [5083] [5098]
Oshindonga (Namibia)	ekakata [5083] [5098]
Rukwangali (Namibia)	ekakata [5083] [5098]
Rumanyo (Namibia)	likakata [5083] [5098]
Setswana (Namibia)	lenatla [5083]
Tswana (Botswana)	legatapitse [5154], sengaparele [5154]
Tswana (Southern)	kanako [1340], sengaparile [2795]

Africa)

## Distribution

Plant origin	Continent	Region	Botanical country
Native	Africa	South Tropical Africa	Angola [2255], Mozambique [5480], Zambia [2255] [5481], Zimbabwe [2255] [5419]
		Southern Africa	Botswana [1669] [5104] [5700], Cape Province [1669] [5104], Namibia [3] [1669] [5104] [5149], Orange Free State [1669] [5104], Transvaal [1669] [5104]

ISO countries: South Africa [5104]

## Descriptors

Category	Descriptors and states
DESCRIPTION	Herb [3] [5104] [5163]; Prostrate/Procumbent/Semi-erect [3] [5104] [5163]; Annual [3]; Climber/Scrambler/Scandent [2136] [2618] [5088]; Perennial [3] [2618] [2795] [5104] [5163]; Succulent - 'roots' [3]; Succulent - unspecified parts; Thorny/Spiny - infructescences [5238]; Plant Height 0.6-0.8 m [5104]
SOILS	Sandy [5088]; Sands [3]
HABITAT	Woodland; Shrubland/Bushland/Scrub [3]; Grassland/Forb-Land; Pioneer on Wasteland; Wooded Grassland; Altitude 900-1800 m a.s.l. [5104]
PRODUCTION AND VALUE	Traded Globally Between Continents
SOURCES OF PLANTING MATERIAL	RBG Kew Seed Bank; Other Seed Sources [5181]
FURTHER DATA SOURCES	Botanical Illustration [3]; Botanical Photograph [1340] [2618] [2795]; Databases [5123] [5341]; Habit Illustration/Photograph [2795]; Grid Map [5123]
SEPASAL DATASHEET STATUS	Nomenclature Checked
CHEMICAL ANALYSES	Biological Activity - unspecified parts [2795]; Unspecified Flavonoids - unspecified parts; Unspecified Sugars - unspecified parts; Iridoids - unspecified parts [2795]; Phytosterols - unspecified parts [2795]

## Uses

Major use	Use group	Specific uses
FOOD	Leaves	infusions/tisanes
ANIMAL FOOD	Aerial Parts	stems, grazing
SOCIAL USES	'Religious' Uses	tubers/tubercles, ritual/religion/magic [2136]
MEDICINES	Unspecified Medicinal Disorders	roots, humans [2388] [2593]; stems, humans
	Blood System Disorders	roots, humans [2593]; humans, blood, oral ingestion [1340]

Circulatory System Disorders	roots, humans, arteries, arteriosclerosis [5163]; roots, humans, blood pressure [5095] [5163]
Digestive System Disorders	roots, humans, indigestion, internal applications [2388] [2593]; roots, humans, purgative, internal applications [2388]; roots, humans, liver, internal applications [2388]; roots, humans, stomachic [2593]; roots, humans, small intestine, teas [2593]; roots, humans [2593]; roots, humans, liver [2593] [5095] [5098]; roots, humans, bile duct [2593]; tubers/tubercles, humans, indigestion [1340]; roots, humans, indigestion, oral ingestion [2795]; roots, humans, intestine, diarrhoea, oral ingestion [5098]; roots, humans, intestine, constipation, oral ingestion [5098]; roots, humans, gall bladder [5098] [5163]; roots, humans, peptic ulcers [5163]; roots, humans, gall bladder, gallstones [5163]; roots, humans, stomach [5095] [5098]; roots, humans, pancreas
Endocrine System Disorders	roots, humans, diabetes mellitus [2593] [5163]
Genitourinary System Disorders	roots, humans, kidneys, internal applications [2388]; roots, humans, kidneys [2593] [5098] [5163]; roots, humans, bladder [2593]; roots, humans, urination [5088]; roots, humans, female fertility, female infertility [5154]; roots, humans, menstruation [2795] [5095]; menstruation
Infections/Infestations	roots, humans, fever, internal applications [2388]; roots, humans, fever [2593] [2795] [5163]; roots, humans, gonorrhoea, oral ingestion [5098]; roots, humans, syphilis, oral ingestion [5098]; humans, fever, oral ingestion [1340] [2795]; roots, humans, tuberculosis, oral ingestion [2795] [5084] [5088]
Inflammation	roots, humans [2388]; roots, humans, connective tissues, inflammation [5163]
Injuries	roots, humans, wounds, ointments [5098]; tubers/tubercles, humans, wounds, ointments [2795]
Mental Disorders	roots, humans, sedative [2388]
Metabolic System Disorders	roots, humans, purine and pyrimidine metabolism, gout [5163]
Muscular-Skeletal System Disorders	roots, humans, rheumatism [2593] [5163]; roots, humans, rheumatoid arthritis, teas; roots, humans, arthritis [2593]; tubers/tubercles, humans, spine, rheumatism [5098]; tubers/tubercles, humans, rheumatism, ointments [5098]; roots, humans, osteoarthritis [5163]
Neoplasms	'roots', humans, malignant neoplasms [5095]; tubers/tubercles, humans, skin, malignant neoplasms, ointments [5095]; roots, humans, malignant neoplasms, ointments [5084]
Nutritional Disorders	roots, humans, tonic, internal applications [2388]; roots, humans, appetite stimulant, internal applications [2593]; roots, humans, appetite stimulant, oral ingestion [2795]
Pain	roots, humans, head; roots, humans, analgesic [2388] [2593]; roots, humans, head, teas [2593]; roots, humans, nerves, teas; tubers/tubercles, humans [1340]; roots, humans, analgesic, teas [5098]; roots, humans [5098]; roots, humans, chest [5088]; roots, humans, oral ingestion [5095]
Poisonings	roots, humans, allergic reactions [2593]
Pregnancy/Birth/Puerperium Disorders	roots, humans, birth [2388]; roots, humans, labour pain [2388]; roots, humans, post partum [2388]; roots, humans, labour, ointments [2388]; roots, humans, pregnancy [2593]; tubers/tubercles, humans, post partum [1340]; roots, humans, labour pain, oral ingestion; roots, humans, labour pain, ointments [5098]

Respiratory System Disorders roots, humans, coughs, oral ingestion [5095] [5098]  
Skin/Subcutaneous Cellular roots, humans, sores, external applications [1340]; roots, humans,  
Tissue Disorders ulcers, external applications [1340]; roots, humans, boils,  
external applications [1340]; roots, humans, external applications  
[1340]

## Picture

None recorded

## Notes

## DISTRIBUTION

*Mozambique:*

Gaza [5480] .

*Namibia:*

Grootfontein, Outjo, Otjiwarongo, Okahandja, Omaruru, Gobabis, Karibib, Windhoek, Rehoboth, Maltahoehe, Gibeon, Luederitz-south, Bethanie, Keetmanshoop and Warmbad districts [5098] .

*Zambia:*

Southern province [5481] .

*Zimbabwe:*

South Region [5419] .

## DESCRIPTION

*Flower:*

Yellow and violet or uniformly dark violet [2618] .

*Flowers:*

Deep mauve-pink with a tinge of yellow in the tube [5163] .

*Flowers:*

Grow on short peduncles in the leaf axils. Petals light pink to purple [5098] .

*Flowers:*

Large, funnel-shaped violet flowers [5088] .

*Fruits:*

Furnished with vicious, hooked 'tentacles' which entangle in hooves of animals as a means of dispersal, can also cripple them [5163] .

*Fruits:*

Numerous long arms with sharp, hooked thorns as well as two straight thorns on the upper surface [2618] .

*Fruits:*

Seed chambers are oval, flat, with arm-like outgrowths, which bear robust, anchor-like hooks [5098] .

*Height:*

0.6-0.8 m [5104] .

*Leaves:*

Greyish green and are usually irregularly divided into several lobes [2618] .

*Leaves:*

Oval, pinnately lobed and covered with glandular hairs [2136] .

*Leaves:*

Petioled and deeply lobed [5098] .

*Roots:*

The tubers of lateral roots (i.e. secondary storage roots) can be up to 25 cm in length and 6 cm in diameter, and can weigh up to 500 g. They are covered by a yellow/grey to red/brown periderm. Directly after harvesting, they are sliced and reduced into sections, and mostly dried in situ. Devil's claw root is mostly sold in small pieces or as a coarse powder [2593] .

*Leaves:*

Rough, shallowly lobed, bluish-green above and silver-grey below [5163] .

*Stem:*

Annual stem, up to 2 m long, radiating from the underground, fleshy rootstock [5163] .

*Stem:*

Short, trailing [5088] .

## **SOCIAL USES - 'RELIGIOUS' USES**

*Tubers/tubercles, ritual/region/magic:*

Before gathering the tubers, a needle or button is put in the soil to buy the tubers from the earth, the belief is that otherwise one will not find tubers [2136] .

## **MEDICINES - UNSPECIFIED MEDICINAL DISORDERS**

*Roots, humans:*

Africans have long used the plant as a folk remedy for various conditions [2388] .

*Roots, humans:*

Used in folk medicine in Europe to treat general manifestations of ageing, but there is no clinical or scientific foundation for this [2593] .

## **MEDICINES - BLOOD SYSTEM DISORDERS**

*Humans, oral ingestion, blood:*

An infusion taken for the relief of blood disease [1340] .

*Roots, humans:*

Used in South African folk medicine to treat blood disorders [2593] .

## **MEDICINES - CIRCULATORY SYSTEM DISORDERS**

*Roots, humans, arteries, arteriosclerosis,:*

Tubers and fleshy roots are used for diseases of arteriosclerosis [5163] .

*Roots, humans, blood pressure:*

Tubers and fleshy roots are used for blood pressure [5163] .

*Roots, humans, blood pressure:*

Used for blood pressure [5095] .

## **MEDICINES - DIGESTIVE SYSTEM DISORDERS**

*Roots, humans, stomachic:*

Bitter iridoids are certainly responsible for the use of the roots as a stomachic [2593] .

*Roots, humans, small intestine, teas:*

Studies have shown that drinking Harpagophytum tea over a period of several days leads to improvements in the symptoms of disorders of the upper part of the small intestine [2593] .

*Roots, humans, indigestion, stomachic:*

Because the drug is a good stomachic and stimulates the appetite, it is useful in dyspeptic complaints [2593] .

*Roots, humans, intestine, constipation, diarrhoea, oral ingestion:*

The Herero take tubers, chop them finely and immerse them in a little cold water, then leave standing to draw well. Two tablespoonsful of this extract are taken daily for diarrhoea and constipations [5098] .

*Roots, humans, gall bladder:*

Used as a remedy for diseases of gall bladder [5098] .

*Roots, humans, gall bladder:*

Used for diseases of gall bladder [5098] .

*Roots, humans, gall stones, gall bladder:*

Tubers or fleshy roots are used for diseases of the gall stones and gall bladder [5163] .

*Roots, humans, indigestion, oral ingestion:*

Taken for indigestion [2795] .

*Roots, humans, liver:*

Roasted tuber is made into a decoction used for liver complaints [5095] .

*Roots, humans, liver:*

There are many testimonies of the plant's success related to disease of the liver [5098] .

*Roots, humans, stomach:*

As a remedy to diseases of the stomach [5098] .

*Roots, humans, stomach:*

Tubers are roasted and eaten or made into a decoction to treat stomach complaints [5095] .

*Tubers/tubercles, humans, indigestion:*

The tuber, which attains a large size, is much prized as a medicine among the european, bushman, the hottentots and some bantu, especially for indigestion [1340] .

*Roots, humans:*

Used in South African and European folk medicine for digestive disorders, but there is no clinical or scientific foundation for this [2593] .

*Roots, humans, liver, gall bladder:*

Used in folk medicine in Europe to treat liver and bile complaints, but there is no clinical or scientific foundation for this [2593] .

## **MEDICINES - ENDOCRINE SYSTEM DISORDERS**

*Roots, humans, diabetes mellitus:*

Used in folk medicine in Europe as an antidiabetic, but there is no clinical or scientific foundation for this [2593] .

## **MEDICINES - GENITOURINARY SYSTEM DISORDERS**

*Roots, humans, kidneys:*

The plant is said to be a remedy for bleeding kidneys [5098] .

*Roots, humans, menstruation:*

Tubers roasted and eaten or made into a decoction to treat menstrual pains [5095] .

*Roots, humans, urination:*

Lateral roots are preferred for the infusion used. The roots are cut into slices and used dried or fresh for urinating problems [5088] .

*Roots, humans, kidney, bladder:*

Used in folk medicine in Europe to treat kidney and bladder complaints, but there is no clinical or scientific foundation for this [2593] .

## **MEDICINES - INFECTIONS/INFESTATIONS**

*Humans, fever, oral ingestion:*

An infusion is taken for the relief of fevers of all sorts [1340] .

*Roots, humans, fever:*

Used for fever [2795] .

*Roots, humans, gonorrhoea, syphilis, oral ingestion:*

The Herero take tubers, chop them finely and immerse them in a little cold water, then leave it standing to draw well. Two tablespoonsful of this extract are taken daily for gonorrhoea and syphilis [5098] .

*Roots, humans, tuberculosis, oral ingestion:*

Lateral roots are preferred for the infusion used for tuberculosis. The roots are cut into slices and used dried or fresh [5088] .

*Roots, humans, tuberculosis, oral ingestion:*

Used as an important tonic in infectious diseases including tuberculosis [2795] .

*Roots, humans, fevers:*

Used in South African folk medicine as a febrifuge [2593] .

## **MEDICINES - INJURIES**

*Roots, humans, wounds, ointments:*

Treatment of wounds [5098] .

## **MEDICINES - MUSCULAR-SKELETAL SYSTEM DISORDERS**



*Roots, humans, rheumatoid arthritis, teas:*

Introduced into Europe as a herbal tea for this purpose [2593] .

*Roots, humans, rheumatism:*

Included in the British Pharmacopoeia 1990 as having anti-rheumatic activity [2593] .

*Tubers/tubercles, humans, rheumatism, ointments:*

Self prepared ointment used for rheumatism [5098] .

*Tubers/tubercles, humans, rheumatism, spine:*

Reported on excellent results of harpa in the 3rd potency for all arthritic conditions, especially rheumatism of the of the spine [5098] .

*Roots, humans, arthritis:*

Used in folk medicine in Europe to treat arthritic complaints, but there is no clinical or scientific foundation for this [2593] .

## **MEDICINES - NEOPLASMS**

*Roots, humans, malignant neoplasms:*

Tubers roasted and eaten or made into a decoction to treat cancer [5095] .

*Roots, humans, skin, malignant neoplasms, ointment:*

Fresh tuber used as an ointment for the treatment of skin cancer [5095] .

## **MEDICINES - NUTRITIONAL DISORDERS**

*Roots, humans, appetite stimulant, oral ingestion:*

Taken as a bitter tonic to stimulate the appetite [2795] .

## **MEDICINES - PAIN**

*Roots, humans, nerves, teas:*

Introduced into Europe as a herbal tea for this purpose [2593] .

*Roots, humans, head, teas:*

Introduced into Europe as a herbal tea to treat headaches [2593] .

*Roots, humans, analgesic, teas:*

Herero chop and dry the tubers for the purpose of making an analgesic tea, which they drink for pain [5098] .

*Roots, humans, chest:*

Lateral roots are preferred for the infusion used, the roots are cut into slices and usually dried, or can be used fresh for chest pain [5088] .

*Roots, humans, oral ingestions:*

Tubers roasted and eaten or made into a decoction to treat menstrual pains [5095] .

*Roots, humans:*

Powder is given to pregnant women for pain relief [5098] .

*Tubers/tubercles, humans:*

The dried tuber is administered to pregnant women daily to relieve pain [1340] .

*Roots, humans, analgesic:*

Used in South African folk medicine [2593] .

## **MEDICINES - POISONINGS**

*Roots, humans, allergic reactions:*

Used in folk medicine in Europe to treat allergies, but there is no clinical or scientific foundation for this [2593] .

## **MEDICINES - PREGNANCY/BIRTH/PUERPERIUM DISORDERS**

*Roots, humans, labour pain, ointments:*

Applied to the abdomen for the prevention of difficult births [5098] .

*Roots, humans, labour, ointments:*

Fresh tubers, made into ointment and applied to the abdomen of women who anticipate a difficult birth [1340] .

*Tubers/tubercles, humans, post partum:*



Dried tuber is administered to pregnant women to relieve pain, the medication is continued post partum with less dose [1340] .

*Roots, humans, pregnancy:*

Used in South African folk medicine to treat complaints in pregnancy [2593] .

## **MEDICINES - RESPIRATORY SYSTEM DISORDERS**

*Roots, humans, coughs, oral ingestion:*

The Herero take tubers chop them finely, and immerse them in a little cold water and leave standing to draw well. Two tablespoonsful of this extract are taken daily for coughs [5098] .

## **TOXICITY/POISONOUS COMPOUNDS**

Devil's claw extracts appear to be free of significant toxicity when administered in the short-term; little is known about long-term toxicity or potential interactions with other commonly-used anti-inflammatory agents [2592] .

## **CHEMICAL ANALYSES - MISCELLANEOUS**

A variety of compounds have been isolated from the plant, including the glycosides of the flavonoids kaempferol and luteolin, and chlorogenic and cinnamic acids. The major chemical component is the iridoid glycoside harpagoside, found mostly in the roots and especially in secondary tubers. Other iridoid glycosides present include procumbide and harpagide. Quinone, harpogquinone, ursolic and oleanic acid derivatives, esters, together with stacyose and other sugars also occur .

## **PHARMACOGNOSY**

The major chemical component, which has been thought to be responsible for anti-inflammatory activity, is harpagoside, a monoterpene glucoside. Harpagoside can be hydrolyzed to harpagide and harpagogenin. Commercial sources of the root extract contain 1.4-2% harpagoside. The plant also contains procombide and a variety of other glycosides, the pharmacologic significance of which are unknown [2592] .

Published animal studies have demonstrated little or no pharmacologic activity for the root or its extracts but, nevertheless, the plant is widely used in Europe, especially by arthritis sufferers. One clinical trial in Germany did demonstrate anti-inflammatory activity comparable to that of phenylbutazone. The suggestion that the plant possesses abortive properties is largely disproven [2592] .

The extracts contain a variety of chemical constituents which possess little anti-inflammatory or analgesic activity. Beyond folklore, there is little rationale for using the extracts to treat inflammatory conditions [2592] .

## **ALTITUDE**

*Altitude:*

900-1800 m [5104] .

## **FLOWERING/FRUITING/SEED SET**

*Flowering, southern Africa:*

From November onwards [5088] .

*Flowering, southern Africa:*

In late summer [5163] .

## **GERMINATION**

Dependent on the seed being buried fairly deeply beneath the surface. Rates are low and older seeds germinate better. Scarification may be beneficial .

## **HARVESTING**

Harvested intensively in south and south-east parts of Kgalagadi District, Botswana and in Namibia. Over-exploitation and browsing pressure may be a danger to some wild populations .

Tubers should be lifted when dormant .

## TRADE

Exported around the world, especially to France and Germany where it is processed into tablets .

In Botswana, harvesting the plant can provide a cash income to many thousands of people who otherwise have little access to the cash economy [2591] .

## ACKNOWLEDGEMENTS AND DATASHEET PROGRESS

Updated for southern Africa by A. Mtuleni; checked by C. Mannheimer; SEPASAL Namibia, National Botanical Research Institute, October 2006 .

Medicinal uses and various notes updated for an enquiry (JRA 3.98) .

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